

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-026638**Date Inspected:** 01-Nov-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 600**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1630**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** See Below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG**Summary of Items Observed:**

At the start of the shift the Quality Assurance Inspector (QAI) traveled to the SAS project site and observed the work and the inspection performed by American Bridge/Fluor Enterprises (AB/F) personnel. The inspection was performed as noted below:

A). This Quality Assurance Lead Inspector (QALI) assigned the QAI, Art Peterson, to the following but not limited to the work stations listed below, to observe the welding and the QC inspection:

OBG W13/W14

OBG W12/W13

1). The QAI performed a joint inspection, identified as 13W-14W-D2, with the QC inspector Patrick Swain. At the conclusion of the joint inspection of the planar alignment Mr. Peterson recorded the dimensions and reported the information to this Quality Assurance Lead Inspector (QALI). After this QALI review with Mr. Peterson there was one (1) area that appeared not to comply with the contract specifications. For additional information see QALI Summary on page xxxx of this report.

At the conclusion of the joint inspection the QAI, Mr. Peterson, observed the fillet welding (seal weld) of the bottom plate to the backing bar identified as 13W-14W-D2. The welding was performed by Xiao Jian Wan ID-9667 and Wai Kitlai ID-2953 utilizing the Flux Cored Arc Welding w/gas (FCAW-G) as per the Welding Procedure Specification (WPS) ABF-WPS-D15-F3200-2, Rev. 0. The weld inspection was performed by the QC inspector, Mr. Swain, utilizing the WPS as a reference. The welding was completed during this shift.

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Later in the shift the QAI performed a preliminary joint inspection, identified as 13W-14W-A, with the QC Lead Inspector Bonifacio Daquinag Jr. There appeared to be areas along the length of the field splice that required additional work due to these areas not complying with the contract documents. In regards to these areas it was required of the welder/fitter, Rick Clayborn ID-2773, to install and utilize additional fitting aids (such blank nuts, key plates and U-bars). The QAI observed Mr. Clayborn welding the blank nuts utilizing the Shielded Metal Arc Welding (SMAW) process as per the WPS identified as ABF-WPS-D15-F1200A, Rev. 2. The WPS was also utilized by the QC inspector, Mr. Swain, as a reference during the inspection of the welding. The preliminary joint inspection and fit-up were not completed during this shift.

The QAI also observed the welder Jeremy Dolman ID-5042 backing gouging the field splice, identified as 12W-13W-D. The back gouging was performed utilizing the Plasma Arc Cutting (PAC) process.

B). This Quality Assurance Lead Inspector (QALI) assigned the QAI, Joselito Lizardo, to the following, but not limited to the work stations listed below, to observe the welding and QC inspection:

Lifting Lug Holes (LLH)

Cross Beam # 17, Service Platform

1). The QAI, Joselito Lizardo, observed the Complete Joint Penetration (CJP) groove welding of the LLH located at OBG W11 and identified as 11W-PP101-W4-W2 and 11W-PP100-W3-W2. The welding was performed by the welder, Jorge Lopez ID-6149 and Mike Jiminez ID-4671 utilizing the Shielded Metal Arc Welding (SMAW) process as per the WPS identified as ABF-WPS-D15-1050A-CU. The QAI observed the QC Inspector, John Pagliero, monitor the welding and verified the welding parameters utilizing the WPS as a reference. The welding of the "A" face was completed at both locations during this shift.

2). Later in the shift, Mr. Lizardo, observed the removal and the re-location of the connection plates located at the north and south ends of the cross beam facing the service platform. This work was performed by Salvador Sandoval ID-2202 utilizing the Air Carbon Arc (ACA) process. At the conclusion of the removal of the existing connection plates, the ACA and grinding was completed on the south side of the cross beam. The welding of the new connection plates were performed utilizing the documents identified as Request For Information (RFI) ABF-RFI-002417R00 and the WPS ABF-RFI-F1200, Rev. 2. The WPS was utilized by the QC inspector, Sal Merino, as a reference to monitor the welding. QAI also observed Mr. Merino performed a Magnetic Particle Test (MPT) to ensure base metal soundness prior to the field fit-up of the new connection plates. The welding of the connection plates were not completed during this shift.

C). This Quality Assurance Lead Inspector (QALI) assigned to the QAI, Craig Hager, to the following but not limited to the work stations listed below, to observe the welding and QC inspection:

OBG 13E/14E

OBG 12W/13W

1). The QAI, Mr. Hager, observed the Complete Joint Penetration (CJP) groove welding of the bottom plate field splice identified as 13E-14E-D3. The welding operator Jin Pei Wang ID-7299 performed the Flux Cored Arc Welding w/gas (FCAW-G) as per the Welding Procedure Specification (WPS) identified as

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ABF-WPS-D15-3110-4, Rev. 0. The QC inspector also utilized the WPS as a reference to monitor the welding and perform the weld inspection. The welding of this field splice was not completed during this shift.

2). The QAI also observed the Complete Joint Penetration (CJP) groove welding, the QC inspection and Magnetic Particle Testing (MPT) of the back gouged surface of the longitudinal "A" deck stiffeners identified as 12W-13W-A-LS6. The welding performed by Fred Kaddu ID-2188 utilizing the Shielded Metal Arc Welding (SMAW) process as per the WPS identified as ABF-WPS-D15-1012-3, Rev. 0 which was also utilized by the QC Inspector, John Pagliero, as a reference to monitor the welding and to verify the DC welding parameters. The welding of the longitudinal "A" deck stiffener was not completed during this shift.

D). This Quality Assurance Lead Inspector (QALI) assigned to the QAI, Doug Frey, to the following but not limited to the work stations listed below, to observe the welding and QC inspection:

Lifting Lug Holes (LLH)

1). The QAI, Doug Frey, observed the welder, Jorge Lopez ID-6149, to perform the Complete Joint Penetration (CJP) welding of the LLH's identified as 11W-PP100-W3-W2 and W4. The field welding was performed utilizing the Shielded Metal Arc Welding (SMAW) process as per the Welding Procedure Specification (WPS) identified as ABF-WPS-D15-1050A-CU. The WPS was also utilized by the QC inspector, John Pagliero, to monitor the welding and perform the in progress weld inspection. The welding of the LLH were completed during this shift.

Mr. Frey also observed CJP groove welding of the LLH identified as 11W-PP101-W4-W2 and W3. The welding was performed by Mike Jiminez ID-4671 utilizing the Shielded Metal Arc Welding (SMAW) process as per the WPS identified as ABF-WPS-D15-1050A-CU. The WPS was also utilized by the QC inspector, John Pagliero, to monitor the welding and perform the in progress weld inspection. The welding of the LLH were not completed during this shift.

Quality Assurance Lead Inspector (QALI) Summary

Later in the shift, this QA Lead Inspector (QALI) also observed the QA Inspector's Craig Hager, Art Peterson and Joselito Lizardo monitor the work performed by the QC inspectors at random intervals and also observed the QA Inspectors verify the welding parameters, the minimum preheat and the maximum interpass temperatures. The QAI's utilized a Fluke 337 clamp meter to measure the electrical welding parameters, Tempil Heat Indicators and/or a Fluke 63 IR Thermometer for verifying the preheat and interpass temperatures. At the conclusion of the shift this QA Lead Inspector discussed and reviewed the work performed by the QAI's in regards to the various observations and the verifications of the WPS's, consumables, welding parameters, preheat and interpass temperatures as described above. The QAI observations of the QC inspection and verification of the welding parameters performed on this date appeared to comply with the contract specifications with no issues noted.

This QA Lead Inspector discussed this issue with the QC Lead Inspector, Bonifacio Daquinag, Jr., and at the conclusion of our conversation Mr. Daquinag informed this QA Lead Inspector that this issue would be documented in the QC daily report and forwarded to the QC Document Control personnel, William Norris, and submitted to the WQCP, James Bowers for review.

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For additional detailed information see the individual QAI, submitted and approved, Weld Inspection Reports (WIR).

This QA Inspector continued the daily review of field inspection reports and update of the field document control tracking records regarding the Orthotropic Box Girders (OBG, Longitudinal and Transverse "A" Deck Stiffeners, Deck Access Holes and the Tower Shear plates). The daily updates and project information was provided by QAI Art Peterson.

Summary of Conversations:

There were general conversations with Quality Control Lead Inspector, Bonifacio Daquinag, Jr., at the start of the shift regarding the location of welding, inspection personnel scheduled for this shift.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy 510-385-5910, who represents the Office of Structural Materials for your project.

Inspected By:	Reyes,Danny	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer
